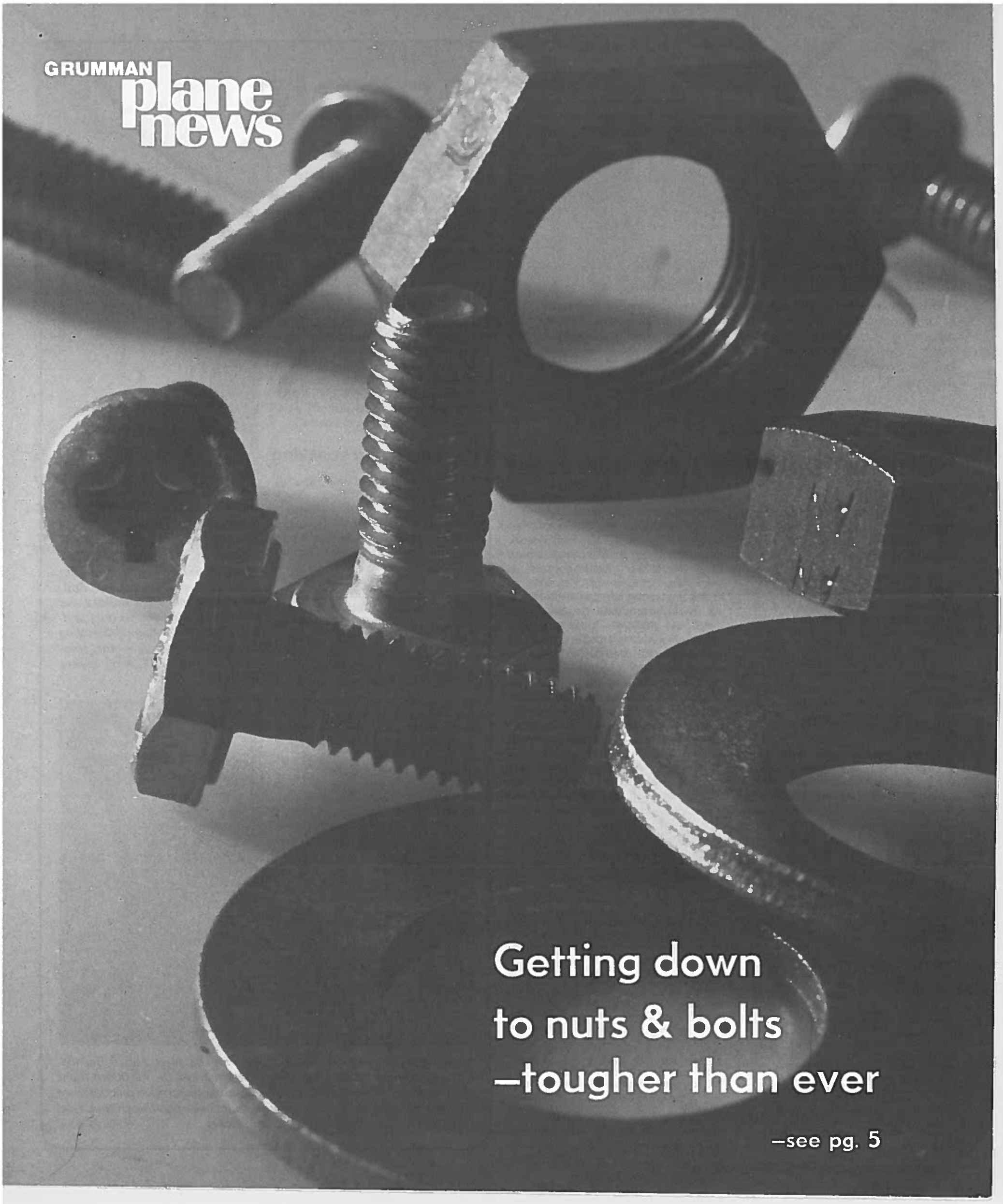
GRUMMAN
plane news



Getting down to nuts & bolts —tougher than ever

—see pg. 5

Big idea men. *Tom Kelly (c), vice president-Engineering, personally congratulated six Grummanites at Calverton Operations for each submitting 25 employee suggestions. The recipients of special diamond pins were (L to R) Charles Hoffmeister, John Romanski, Donald Kowalski, Ronald Pulis, Philip DeLuca, and Timothy Mc Queeney.*

Tuition Reimbursement

Summer classes now covered

Grumman Aerospace has modified its Tuition Reimbursement Program to allow reimbursement for "summer sessions," as of January 1, 1980.

In past years, courses ending in July, August, or September were considered "summer sessions" and were excluded from the Tuition Reimbursement Program. But in George Skurla's year-end message to Grummanites, the chairman and president of Grumman Aerospace announced that reimbursement will be provided for eligible courses taken during the summer of 1980 and thereafter.

"This change will help some Grummanties save money and/or complete their educational program sooner," said Gus Lanzo, director of Career Education and Development.

In addition to inclusion of summer courses, the maximum number of approved courses which may be taken simultaneously is two. The maximum number of credit hours which can be taken is six in undergraduate programs and eight at graduate levels. In any calendar year, a maximum of 15 undergraduate credits or 16 graduate credits are reimbursable under the Grumman program.

To find out more information about this program, pick up the new revised Tuition Reimbursement Program brochure at your nearest Employee Services office. If you have additional questions, contact Helen Holzapfel on Ext. 3385, mail stop A01-39.

calendar

Aikido Club: every Mon. and Wed., 5 p.m., Pl. 35 caf.; for sport and self-defense; L.I. Aikido Federation; Grumman employees welcome. B. Bauman, Ext. 2910/M. Stock, Ext. 7186

Alcoholics Anonymous: every Mon., 5 p.m., Pl. 15, conference room C; closed meetings; Personnel Relations, Ext. 3521; Calverton: Chemical Dependency Discussion Group, every Mon., 4-5 p.m., Hdq. Bldg.; open meeting. C. Robb, Ext. 117-6526

Coin Club: (Calverton) every Fri., 1st noon lunch, Pl. 6, conference room; Grumman employees welcome. W. Kondratowicz, Ext. 117-6680

Cycle Touring Club: Mon., March 8, The Knight Club, Bethpage, 5 p.m.; business meeting. Guests welcome. T. Beckman, Ext. 8994

Fencing Club: every Tues., after 4:30 p.m., Pl. 30 caf.; beginners and experienced fencers; instruction and competition. Grumman employees welcome. P. Chaldaris, Ext. 4331

Folk Dancers Club: every Tues., folk dancing, every Thurs., hustle and ballroom dancing; some instruction available; lunchtime, receiving area, Pl. 6; all Grumman employees welcome. E. Urcivoli, Ext. 117-6688

Grumman Family Campers: Sun., March 16, Great River Pl. 43, 5 p.m.; monthly meeting. Guests welcome. Reminder, Annual Dinner Dance, Island Hills Country Club, Sayville, 8:30 p.m., March 1. F. Giacini Ext. 115-6137

Model Railroad Society: every Wed., 5:30-9:30 p.m.; Model RR Bldg., (at Pl. 3 RR crossing); regular meeting; all Grumman employees welcome. R. Muntz, Ext. 115-6044

Deadline for March 14th issue of PLANE NEWS is February 29.

people

Soaring high

Pete O'Connell, a Grumman flight test project engineer at Calverton, was recently elected president of the Long Island Early Fliers Club.

Established in 1957, the club has close to 1,000 members . . . many of them Grummanites and retirees. The club operates an Aero Museum in Suffolk County and helped create the Cradle of Aviation Museum at Mitchel Field in Nassau County. Members have also restored Lindberg's Jenny and other historical aircraft now at the Mitchel Field museum.

Professionally speaking

While serving as chairman of the Metropolitan New York Reliability Society Chapter, Grummanite Joe Drvostep helped revamp his chapter's curriculum and create new member interest.

For his efforts during 1978-79, Drvostep was honored at the 1980 Annual Reliability and Maintainability Symposium in San Francisco last month. Drvostep's chapter serves New York City, Long Island and Westchester residents; most of the 130 members live on Long Island.

A Grummanite since 1969, Drvostep is a group head and senior reliability engineer in Plant 35.

Kudos. *Grummanite George Collora, tool design engineer, recently received the Boeing 767 'Pride in Excellence' award from Tony Oliver (R), Boeing Resident team manager. Collora was cited by Boeing for his outstanding work in developing handling concepts and designs for shipment of the 767 wing center section.*

Hawkeye milestones. *Grumman flight test engineers Robert Barrington and Armand Biava (2nd R) recently marked their 2,000th flight hour in the E-2. Presenting them with commemorative plaques were Richard Mazourek (L), deputy for technical operations/flight test; and Donald Fish (R), E-2 flight test manager.*

Future fortunes. *George Skurla, Grumman Aerospace Chairman and President, addressed the February 14 meeting of the Long Island Section of the American Institute of Aeronautics and Astronautics. Skurla told members of the local aerospace community that he is optimistic about the future of Long Island's high technology economy. (Photo by Bob Settles)*

Today's energy-saving suggestions from the U.S. Department of Energy cost less than $5. Together, they can save $20 to $30 per year in homes with gas water heaters, and $45 to $70 with electric heaters.

These savings are based on costs of 5 cents per kilowatt hour for electricity and 37 cents per therm for gas.

A good way to save money is to add an extra layer of insulation around the outside of the water heater tank to cut heat loss. This should save $20 a year for electric water heaters, and about $10 a year for gas. You can buy enough regular foil-backed insulation and tape to do this job for less than $5.

Wrap the insulation so that it completely encircles the tank and also covers the top. It goes around the tank like gift wrapping on a package — the shiny foil on the outside. Seal the seams with duct tape. A circle can be cut for the top and attached to the insulation on the sides of the tank with tape.

Cover all exposed surfaces of the tank, except for certain critical areas that must be left free to "breathe." On electric water heaters it is best not to cover the drain faucet, the thermostat access panel, or the relief valve that comes out of the top of the tank. On gas water heaters, a crucial warning must be heeded: Do not cover air inlets, pipes, controls, relief valves, or the flue at the top of the heater.

If you are unsure about the various crucial openings on gas and oil water heaters, you can buy a manufactured insulation jacket kit with holes precut for the critical areas. It is also important that the insulation be affixed to the tank so that it can't slip and cover the openings later. A mistake here could cause a fire or even an explosion.

A switch to a lower temperature on the washing machine can have a major impact on utility bills. It takes about 35 gallons of water to do a full wash and rinse, or about 17 gallons for each cycle. How much of that water is hot depends on which button you push. A hot wash and warm rinse combination, the highest setting on most machines, requires 25 gallons of hot water. A load a day on such a setting, for electric water heaters, could easily cost $100 a year. Changing the rinse water to cold, which experts say does not effect the results of the wash, will save 8 of those gallons per day, or $25 a year. By changing the wash setting from hot to warm, you could save another $25. If you have a gas water heater, the savings would be $10 a year for each strategy.

GRUMMAN plane news

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Associate Editors
Kathy Housley ext. 3293
Norine Lyons ext. 5119

Editorial Assistant
Clare Byrne ext. 8999

Plane News from outside line
516-575-3293

Turn it off

Savers crowd exhibit

Thousands of Grummanites are getting an extra treat with their lunch. Booklets, stickers, and free advice on how to save energy are available as part of the month-long traveling Energy Awareness display at Grumman.

The display has been traveling to every major Grumman plant on the east coast. Sponsored by the Energy Conservation Services group of the Facilities Engineering department, the program offers Grummanites the chance to discuss home energy problems with the experts.

John Allen of Plant 30 visited the display when it came to his building. "This is terrific . . . this helps everyone. I'd like to see some more information on solar energy," said John who recently made a modification to his home clothes dryer, venting the warm air back into the house.

One panel of the traveling display warned about fireplaces, aluminum siding and other expensive improvements that many people think of as energy savers.

"That drew a lot of questions," says Larry Merrill, project manager for the campaign. "The initial cost for any of those improvements is usually far greater than any possible pay-back in energy savings."

Ultimately, the program hopes to encourage Grummanites to bring their home energy-saving habits to work with them. Studies by the Energy Conservation Services group have shown that an additional 20 percent of the company's total energy expenditure could be saved by people on the job.

"That means turning off unnecessary lights, closing doors, and turning off equipment promptly," says Merrill.

For example, closing a hangar door for an additional 10 minutes per day can save 1,000 gallons of oil per year. Just turning off equipment when the job is done — from heavy shop machinery to typewriters — can impact tremendous savings.

As they made their way through the display, many people traded their own methods for saving energy at home. One man claimed that he saves by keeping a light turned *on*.

"I put a lamp right near the thermostat in the living room," he says. "Because of the heat it gives off, the thermostat reads 70. . . but the temperature in the room is actually 67 or so. I've been faking out my wife all winter."

obituaries

DONALD BROWER of Small Parts Fab., Pl. 2, died Jan. 24 at the age of 34. He had been with the company since 1972 and resided at 1077 Robin Road, Franklin Square.

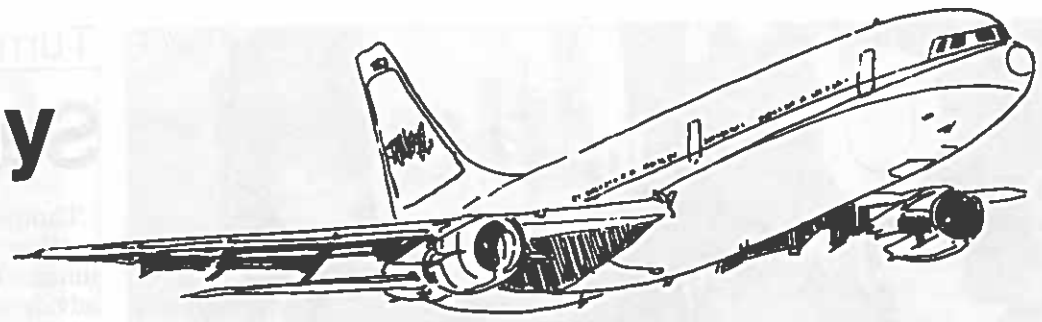
JOSEPH McANDREW of Elect. Wire Prep., Pl. 44, died Jan. 25 at the age of 51. He had been with the company since 1955 and resided at 345 Riner Rd., St. James.

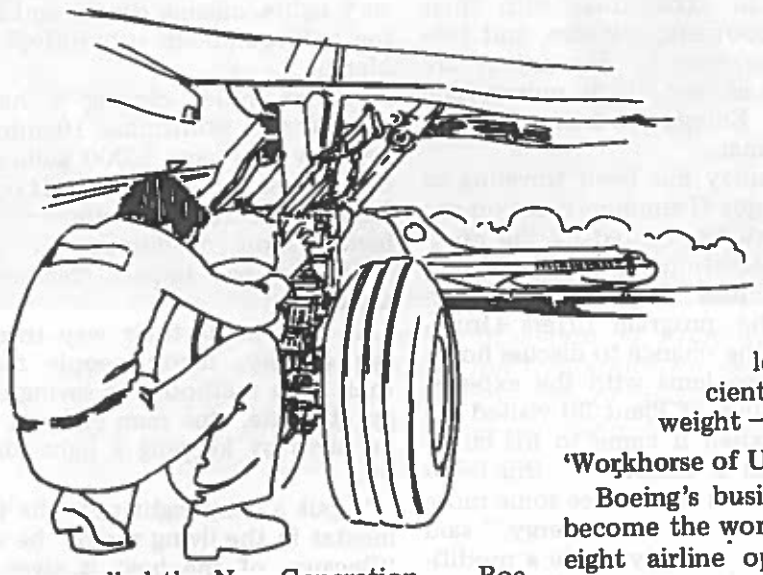
KURT REUPKE of Aero Test, Pl. 5, died Feb. 7 at the age of 55. He had been with the company since 1958 and resided at 1644 Roland Ave., Wantagh.

Stuart rescue. *Fred Annette, Grumman photographer, and Frank Walton, Stuart Operations staff, were in a leased helicopter taking aerial photos of the Florida facility when they heard a 'mayday' call. The Grummanites and the chopper pilot arrived on the scene in four minutes and were able to direct a fishing boat to rescue three stranded boaters. (Photo by Fred Annette)*

A touch of Grumman

Boeing's new family





They are called the New Generation . . . Boeing's new fuel-efficient commercial jetliners designed for the Eighties and beyond. And each new Boeing 767 and 757 will have a touch of Grumman in it.

The medium-wide bodied 767 is the first new Boeing aircraft to go into production since the wide-bodied 747 in 1966. This 200-passenger twin-jet was primarily designed as a replacement for aging planes that airliners will phase out in the near future. Such aircraft will be too noisy by 1985 regulations or burn up too much fuel.

The 767 will be used on trips of about 2,000 to 3,000 miles, i.e., Los Angeles to Miami. Its long, slender fuselage and rather thick but lightweight wing will help keep its fuel consumption down. According to Boeing, fuel burned per seat (a standard measurement for airliner efficiency) is 35 percent less for the 767 than for earlier medium-range jetliners. That could save an airline operator replacing earlier aircraft with a 10-airplane 767 fleet up to $14-million a year in fuel costs.

The 767's two-aisle passenger cabin follows the tradition for spaciousness established by the 747 — the first of the wide-body airliners. The popular seven-abreast seating lends itself well to the most efficient body shape for drag and weight — leading to better fuel economy.

'Workhorse of U. S. aircraft'

Boeing's business analysts expect the 767 to become the workhorse of U. S. aircraft. To date, eight airline operators have placed 135 firm orders. First delivery is slated for mid-1982.

At the outset of 1979, Grumman joined the 767 production team with the largest commercial subcontract in company history. Under a multi-million contract, Grumman is building the 7,000 pound wing center section and keel-beam assembly or "wing box." This is the airframe's keystone — a strong, massive structure to which the wings attach.

With delivery of the first of 300 shipsets slated for the fourth quarter of 1980, the Grumman 767 contintingent is busy at Bethpage, Glen Arm, Milledgeville, and Stuart, facilities.

While 767 work continues at a busy pace throughout the company, Grumman signed another subcontract with Boeing on January 22, 1980. Under this multi-million dollar agreement, Grumman will build the wing spoilers for the new Boeing 757.

Designed to be a replacement for airplanes such as the early versions of the 727 and the DC-9, the 757 twinjet features new technology wing and engines to give the best fuel mileage of any airliner in its class. The short-to-medium range jetliner has a passenger capacity between the 727-200 and the 767.

Following Boeing's commonality plan for its new generation of aircraft, the 757's wing makes use of the same advanced technology used in the 767. Its advanced flight deck employs the same technology concepts planned for the new 767 jetliners, as do the air-conditioning packs and auxiliary power units. Its engines will be derivatives of proven powerplants.

Both new Boeing planes come equipped with four-wheel main landing gear systems which will allow operations on runways previously closed to commercial planes of its size.

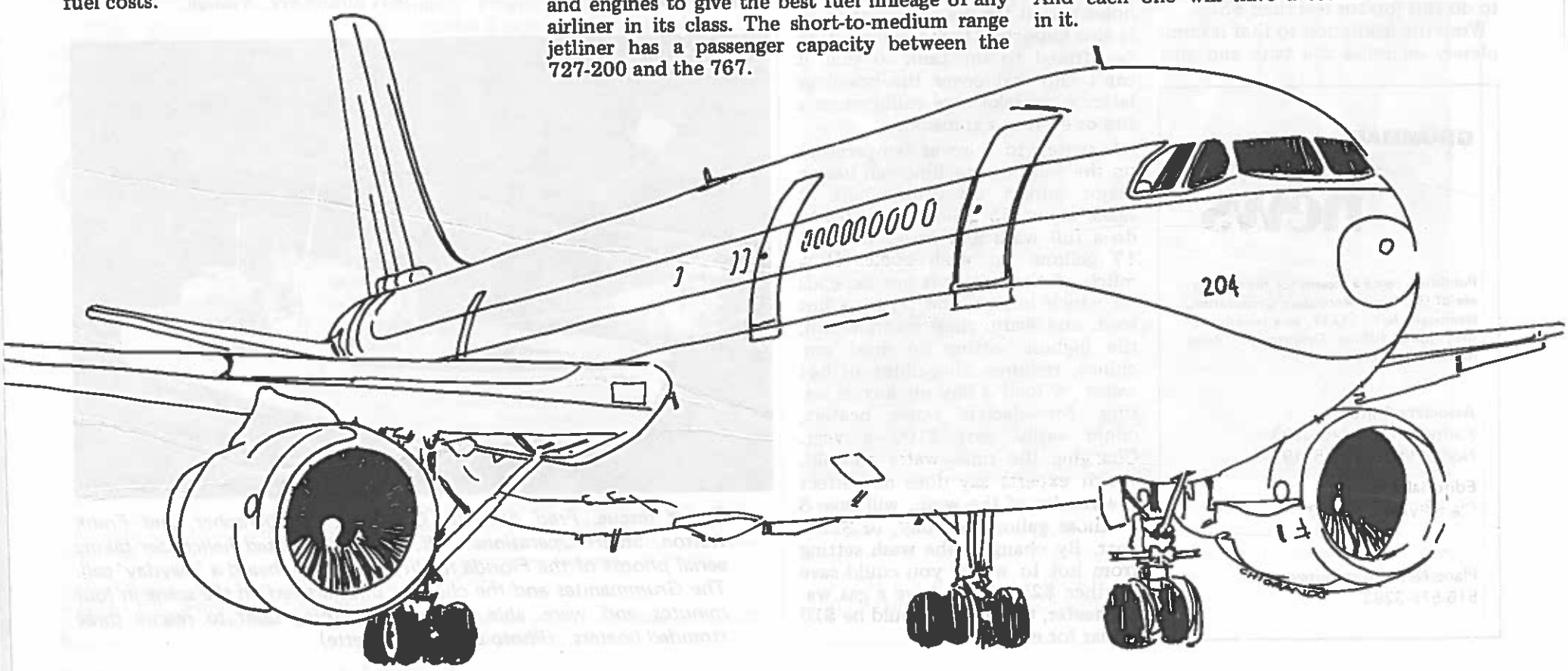
In the interest of saving weight for the fuel-efficient 757 aircraft, its spoilers will be built from light-weight graphite epoxy material at Grumman's composites facility in Milledgeville, Georgia. Each shipset is made up of 12 individual spoilers which are approximately six feet long. (The spoilers are wing control surfaces which are mounted on the top side of the wing.)

To date, Boeing has received 40 firm orders from two airline operators for its 757 airplane, which will begin flight testing in early 1982.

Aerospace analysts hail Boeing as *the* commercial aircraft designer and builder of the industry. It's latest fuel-efficient new generation will do much to solidify that reputation.

Wrote Joseph Sutter, Boeing's Vice President Operations and Product Development in a recent edition of *Grumman Horizon*, "We're going to deliver very efficient airplanes that will stay this way for many years of profitable operation — 20 years or more. This new family certainly will be in service that long and probably much longer.

"Because we have designed them to accept new technology as it comes along, we have every confidence that the new Boeings will be airline 'workhorses' throughout the coming decades." And each one will have a touch of Grumman in it.



DO NOT REQUISITION

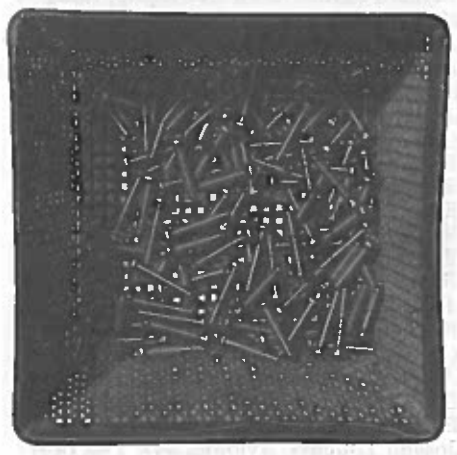
It may not be there

Many of the shop areas around Grumman have floors made of wooden blocks. Over the years, the blocks have become inlaid with glints of metal parts; nuts and bolts and washers that fell to the floor and were walked into the wood. During World War II, when Grumman plants turned out 18,768 aircraft in record time, speed was the important thing. It made more sense to reach for a new bolt than to stop and look around for the one that had fallen.

"There was a time when hardware seemed in endless supply," says Tom Harding, director of Material Management. "It was inexpensive, plentiful, and we took it for granted. Those days are gone forever."

Throughout the aerospace industry, parts shortages have become an increasingly serious and endlessly frustrating problem.

This is certainly nothing new to industry in general and the aerospace industry in particular. But until recently, most shortages came in such specialized areas as rare metals or machined parts.



Now these shortages have spread to the smallest and most basic hardware. The nuts, bolts and washers no longer come in endless supply. The shortages of these parts, which over the years have become known as "jelly beans" or DNRs (do not requisition) because of their availability, is now a cause for concern.

In preparing Grumman's shopping list, Manufacturing, Material Management, and Procurement must work together very closely; looking at schedules and commitments, availability of items, and, if necessary, how to work around existing shortages.

The key word is lead-time.

Look Ahead

Because of escalating costs and stretched lead times, the period between order and delivery, Grumman has instituted an intensive program of planning and conservation. Planners are attempting to anticipate their hardware needs at least a year in advance to compensate for lead times which have spiraled from a few weeks to a year and more. And the situation has led to a vigorous campaign to use parts carefully, avoid spoilage, and to return unused items to the proper area. Manufacturing areas are dotted with posters that remind everyone, "Parts are precious."

Recent events have worsened the situation and there appears to be no end in sight. The increase in aerospace business, especially in the commercial airliner field, caught some hardware suppliers short. This was then combined with a raw materials shortage especially evident in titanium, cobalt, aluminum and chromium. And the price of these materials followed gold as it skyrocketed.

And while demand in the industry increased, hardware manufacturers were hesitant to invest in additional capacity because the nation's economists were almost unanimous in predicting a recession.

Supplier's View

Dick Reynolds, vice president of sales for Aero Hardware, a Rye, New York, supplier to Grumman, says the situation has gotten so serious that self-locking nuts that only a year ago could be delivered in eight to ten weeks now have a 52 week lead time.

"And there is one bolt manufacturer that is telling customers to come back in two years if he doesn't have the item in stock," Reynolds asserts.

"All this means that low-cost items are now high-cost items," the wholesaler says. "A standard machine screw that cost $8 to $10 a thousand a year ago now goes for $25 a thousand . . . if you can get it."

Another Grumman supplier says that the shortage of materials combined with the huge increase in demand from the industry has led to a situation where the only answer is "to order a year or a year and a half in advance of delivery. The days are gone when the boss could just yell 'get me that bolt!'"

Great River Gold

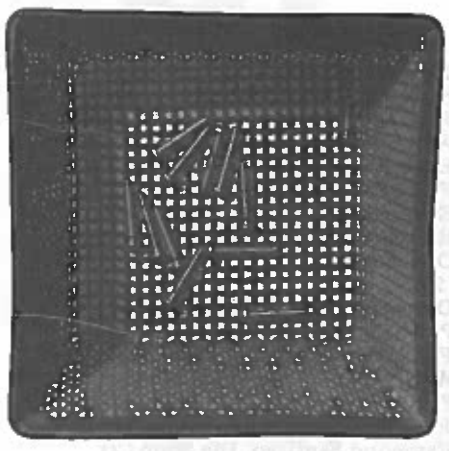
Nuts and bolts aren't the only parts that are precious. At Great River, the runaway cost of gold has driven the cost of some pins and electrical connectors from a price of $1 a piece a year ago to as much as $20 today.

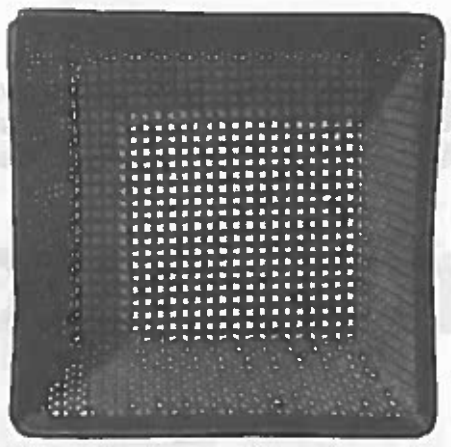
Electronic hardware is experiencing the same shortages as the more traditional parts. Some makers of integrated circuits or chips for printed circuit boards aren't taking orders until the summer of 1981.

In electronics, not only does Grumman have to compete with others in the industry to get parts but there is a growing demand for chips from commercial makers of everything from toys to automobiles. "They're just eating them up," says one observer.

"We're doing business in a different atmosphere," says Tom Harding. "We're not calling the shots. The aluminum mills, for example, have been running things on an allocation basis for some time now. They tell you how much you can have."

With lead-times jumping from six to 40 weeks, Procurement people are spending more time on the road trying to get parts quicker. But when you have to send people out to look for things instead of placing an order on the phone, that $2.35 bolt is suddenly costing a lot more money.





Other solutions, when a shortage seems inevitable, include going back to Engineering to find out if another part may be substituted, or making the part in-house. But those can be expensive alternatives.

"I don't think things will go on like this forever," says Harding. "But until the situation improves, careful planning and careful use are our best defenses. Every nut, bolt, or rivet spoiled or lost may take a long time to be replaced. And the money wasted, of course, can never be replaced."

Time and $$$$$$$$

One example of the problem is a small bolt used on the A-6E Intruder. In September 1979, it took 16 weeks to get this bolt. By January, that went up to 44 weeks . . . and the latest word on it is 70 weeks.

The bolt is used on the canopy and windshield assembly; 78 of them are used on each A-6E.

But lead-time isn't all that's skyrocketing; prices for all those nuts and bolts — as well as all purchased parts — have spiraled as well. For example, Part No. NAS 1580 A 4H 23 T — a long number for a small steel bolt used on the wing assembly of the EA-6B. The lead-time has gone from 30 weeks to 60, and the price has gone up from $1.81 to $2.85. That's not for a dozen. That's $2.85 *per bolt*.

W. Strong

S. Hajek

A. Missale

L. Stacey

E. O'Donnell

S. Salina

W. Kiesel

M. Lombardo

R. Lambert

service milestones

35

Eugene Jeskin, Tool Cntrl. (2)
William Heuslein, Executive Staff (5)

30

Henry Ziermann, Steel Parts Assy (2)
Warren Lipman, Jigs & Fixtures (2)
William Trukafka, Press (3)
Thomas Harmon, Corp. Instr. Sys. (7)
Robert Vanderbilt, Distrib. Servs. (30)
John Teufel Jr., Prod/Comm. Est. (30)
John Falque, Mech. Detail & Fin. (43)
George Bennett, Prod. Rel. & Anal. (43)

25

Warren Strong, Assy Method & Plnng. (2)
Stanley Hajek, Prod. Plnng. (2)
Amedo Missale, Jigs & Fixtures (2)
Lee Stacey, Maint. Admin. (2)
William Morley, Static Test (5)
Edward O'Donnell, Prod. Devel. Op. Center Staff (5)
Salvatore Salina, Ops. Anal. (5)
Frank Lucas, Elect. Install. (6)
William Swamback, Prod. Deputy & Statn Foreman (6)
Osborne Singer, Prod. Release & Analysis (6)
Robert Smyth, Flt. Test Mgmt/Staff (7)
Richard Stubbe, Struct. Sys. Prod. Supp. (7)
Frederick Taylor, Airport Ops. (7)
Robert Butts, Elect. Test (8)
William Kiesel, Fluid Pwr/Pyrotechnics (25)
Mario Lombardo, Structures Anal. (25)
Richard Lambert, Advance Plnng. (30)
Louis Kaufman, Fluid Dynamics (35)
Charles Farell, Sect. Admin. (35)
Richard Boehning, Prog. Contracts (35)
Vincent Tancredi, ILS Log. Servs. (69)
Willis Carpenter Jr., Insp/QC (77)
Frederick Balk, Cnctr. Maint. Serv. (94)

20

Milton Kitchen Jr., Tech. Reqts. (1)
George Stelljes Jr., Supp. Equip. Serv. (1)
Ruth Moorhead, Assy Method & Plnng. (2)
Joseph Sicari, Maint-Facil Equip & Gen. (2)
Fitzpatrick Edmonds, Trans-Ops (3)
George Soltan, Maint-Rearrangement (3)
Frank Armanno, Repair Cntrl. (4)
Loretta Heithaus, Distrib. Servs. (4)
John Rogers, Prog. Procure-Trainer Sys. (5)
Nicklais Burdo, Central Setup Area (5)
Timothy McCarthy, Maint-Facil Equip & Gen. (5)
Charles Gudelis, Corp Plnng Cntrl & Budg. (5)
Paul Klaverweiden, Meas. Stnd. Lab & Log Ops. (12)
Carlon Clark, Elect. Test (14)
William Besemer, ILS Tech. Illus. (15)
John Keane Jr., Mfg. Sched. (25)
Mary Lou Vanderhoof, Property Accounting (30)
John Murphy, Des. Eng. Proj. Eng. (32)
Joseph Martin, Computer Appl. (35)
Thomas Campo Jr., Prod. Train. Mgt/ Staff (39)
Walter Miller, TS Cust. Train Instr. (39)
John Klevanosky, QC Mgt & Staff (43)
Rudolph Pascucci, Receiving Ins. (44)
Peter Schmidlin, A/C Sys. Serv. (81)

15

Timothy Higgins, ILS Elect. Pack. (1)
Seymour Dotz, ILS Resource Cntrl. (1)
John McCuen, ILS Verif. & ILS Supp. (1)
Anthony Rubertone, ILS RF/Cntrls
Eugene Quarello, Operations (1)
Frank J. Carroll, Operations (1)
Emil Babyak, Prototype (2)
Richard Harwell, Tanks & Ducts (2)
Otis Adams, Wing Inner Panel & Combo (2)
Dominick Montana, Mech. Struct. & Proto (2)
Frank Bambara, EBW-Final Assy (2)
William Brown, Prod. Supervision (2)
Francis Pelkowski, Welding Group (2)
John McKinnell, Stockroom (2)
Raymond Santiago, Die Shop (2)
Bernard Tolmie, Det. Pls. Plnng. (2)
Richard Herman, Central Storage & Retrieval (2)
Paul Sottung, Cent. Storage & Retrieval (2)
Nicholas Tallarico, Plans & Programs (2)
Anthony DiMartino, Q.C. Mgt/Admin. (2)
Henry Ortiz, Insp-Tooling (2)
Donald Thomas, Parts Paint (3)
Ralph Kuckens, Final Assy (3)
Charles Martin, Fuselage Assy (3)
George Karastamatis, Center Section-Final (3)
William Oelcher Jr., Honeycomb Prep. (3)
Edward Brown Jr., Prod. Supervision (3)
Gustavo Hudo Jr., Prod. Supervision (3)
Victor Pierno, Mach. Oper-Tech Serv. (3)
Irving Schneidkraut, Insp-Mech. (3)
Theodore Flynn, Insp-Mech. (3)
Ernest Kostner, Insp-Tool (3)
Jack Diana, ILS Mech. Eng/Des. (4)
Dejan Ninkovich, ILS Sys. Des. Eng. (4)
Joseph Feddern, ILS Training Sys. Eng. (4)
William Austin, Sys. Integ. (4)
Joseph Reiter Jr., Vehicle Liaison Eng. (4)
William Cole, Insp-Elect. (4)
Jack Nuccio, Insp-Elect. (4)
John Grim Sr., Static Test (5)
Eric Cullis, Static Test (5)
John DeBlasio, Static Test (5)
George Stephen, Final Assy Struct. (5)
William Caspersen, Supp. Equip. Prod. (5)
Charles Marchessault, ILS Training Sys. Eng. (5)
Thomas Veltri, Mech/Fluid Sys. Test (5)
Keith Wilkinson, Dynamics (5)
Dominick Mastandrea, Operations (5)
William Gallagher, Operations (5)
Gerald Daly, Corp. Contracts (5)
Gerald Heinzman, Corp. Plnng. Cntrl & Budg. (5)
Thomas Bradshaw, Instr. Test (6)
Michael Kenny, Resources (6)
Carl Thilburg, Fluids (6)
Richard Redding, Engines (6)
Lawrence Smith, Structures (6)
Frank McCroy, Structures (6)
Robert Smith, Pl. Stores (6)
Mildred Staniewicz, Secretarial Serv. (6)
Alec Harvey, Resource Plnng. (6)
Alice Giesler, Administration (7)
Stephanos Gajdjis, FTT Perf. & Propul (7)
John Cangelosi, FTT Flt. Dyn. & Load (7)
Reinaldo Gonzalez, Flt. Ops. (7)
John Gordnick, Struct. Sys. Prod. Supp. (7)
Robert Fitzgerald, Aircraft Cntl. Eng. (7)
Kenneth Saulter Jr., Flt. Ops. Insp. (7)
Jack Risalvato, Flt. Ops. Insp. (7)
John Addeo, QC Lab. (10)
Douglas Howard, Insp-Tool (11)
Paul Shaw, Metallurgical Eng. (12)
John McKim, Meas. Stnd. Lab. & Log. Ops. (12)
Richard Poggie, Instr. Test (13)
Michael Keaveny Jr., Hydraulics (14)
William Byerly, Maint-Rearrangement (14)
Hugo Ritucci, Elect. Des. & Devel. (14)
John Courtney, Lab. Mgmt. & Tech. (14)
Anna Dluginski, Distrib. Servs. (15)
Cesare LoPalo, Repro Servs. (15)
Ernest Wiebke, Repro Servs. (15)
Lewis McCormack, ILS Pub. Mgmt. (15)
Philip Ivone, ILS Pub. Proj. Mgt. (15)
James Stanley, ILS Tech. Writ. (15)
James Murphy, ILS Tech. Writ. (15)
Matthew Moss, ILS Tech. Illus. (15)
Walter Kissam, ILS Pubs. Cntrl. (15)
Aaron Caylor Jr., Trans-Ops. (20)
Thomas Carson, Trans-Equip. Maint. (20)
Philip Harvey, Warehouses (21)
Leo Senior, Supply Asset Cntrl. (21)
Arthur Icart, Supp. Asset Cntrl. (21)
Edward McCue, PPO-E-2 (25)
Frank Leitner, Mfg. Prog. Plnng. (25)
Leonard Kurke, ILS Training Sys. Eng. (25)
George DiIorio, Struct. Des. (25)
John Roman Jr., Struct. Des. (25)
Rubin Kreis, Equip. Term Des. (25)
Michael Vele, Sys. Des. (25)
James Jacquette, Sys. Integ. (25)
William Sheridan, Operations (25)
Vito Lefemine, Tech. Direct. (25)
Mary Fredel, Financial Op/Secretaries (25)
Ronald Tarpinian, Sys. Eng. Proj. Eng. (25)
John Cirami, Corp. Instr. Ground Test (25)
Carl Echols, Prog. Mgmt. F-14A (25)
Alexander LaSota, Config. Data Mgmt. (25)
Cesidio Pietromartire, Config. Data Mgmt. (25)
Millard Inglee, Corp. Security (28)
Stewart Epstein, Proc. Ops. Info. Sys. (30)
William Nichols, Gen. Commod. (30)
Joan McGuckin, Gen. Commod. (30)
Harry Daum, Procure. Mgmt-Mgmt/ Staff (30)
Joseph Russo, Fac. Admin. (30)
William Jacob, Elect. Eng. Pwr/Ctrls. (30)
Marcel Piry, Fluid Mech. (30)
James Koch, QC Supplier (30)
Ida Haefele, QC Supplier (30)
Adele Gogel, Tech Reqt. (32)
Theodore Aronow, Pwr Pl. Des. (32)
Bernard Savoie, Crew Sys/Equip. Integ. (32)
Anton Chalus, ILS Tech. Servs. (35)
Eugene McCormack, ILS Verif. & ILS Supp. (35)
Jerome Zajic, ILS Verif. & ILS Supp. (35)
Ruth Schuster, Info. Rec. & Serv. (35)
Robert Biasotti, Contour Devel. (35)
Elnora Hendricks, Sys. & Cntrl. (35)
William Kummer, Sect. Admin. (35)
Frank Sartori, Router & Shear (37)
Ronald Scholer, ILS Sys. Tech Mgt. (40)
John Queally, Reliability (40)
Kenneth Haller, Safety & Maintainability (40)
Aaron Rabinowitz, Software Devel. (40)
Lawrence Buck, Config. Data Mgmt. (40)
Barry Klecan, Resources (40)
Joseph Touchet, Avionics Sys. Test (43)
Henry Browne, Prod. Cntrl. (43)
Robert Nelson, Status & Cntrl. (43)
John Burns, Methods Eng. (43)
Leonard Galfano, Resources (43)
Herman Haefele, Resources (43)
William Sposato, Invent. Mgt. (44)
Carl Camarda, Insp. Elect. (44)
John Sims, Weight Optim & Tech. Devel. (53)
Francisco Mazzola, Operations (66)
William Stevens, E-2C Wings (77)
Hugh Larch, Dassault (77)
Joseph Christina, Elec. Sub. Assy (77)
Donald Reisch, Airframe Sys. (79)
Bruce Clark, GSFC-Mission Ops. (84)
Daniel Tynan, Engineering (88)
Walter Mooney, ILS Log. Servs. (95)
Angelina Uliano, Payroll (111)

Select varsity keglers

The last pin has fallen in the 1980 GAA varsity bowling trials. Judging from the final stats, Grumman will be fielding two formidable squads this year, led by Ed Gabriel and Maureen Croes.

Though the men's team only captured one Long Island Industrial title in the Seventies, the outlook for the Eighties is brighter than ever. A large part is due to the efforts and talents of team captain Ed Gabriel. During the varsity trials, Gabriel led the pack with a 189.7 average for a total pinfall of 5,124 for 27 games.

Last year, the varsity veteran grabbed the best bowler of the tourney title. He beat out 79 other keglers by averaging over 193.

His teammates for the 1980 Grumman-sponsored tourney are Gene Bagnall who averaged 188 during the trials; Frank Tucholski who rolled a 27-game series of 5048; Ed Hilbert who bowled 5046; and Grover Hart who finished fifth with the 5017 pinfall.

Others in the top 10 line-up for Grumman are George Fowler, 5012; Rudy Dunkley, 5000; Herb Pirkl, 4998; John Muraca, 4927; and Jerry Kelly, 4909.

If you'd like to watch the Grumman men's varsity bowl in the L.I. Industrial tournament, drop by the Mid Isle Lanes in Hempstead at 8 p.m. on March 1, 8, 15, and 22.

A mainstay on the Grumman women's varsity during the last decade — a rather triumphant decade at that, Maureen Croes is this year's team captain. Croes averaged 186.7 during the eight-game trials for a grand pinfall of 1494.

Joining her on the L.I. Industrial defending championship squad are Arleen Schwemmer who bowled over 170.7 for a 1322 series; Lorraine Coulaz who rolled 1309; and Rita Mathia who finished one pin behind Coulaz.

Rounding out the 1980 Grumman women's varsity team are Bella Cherry, 1304; Joan Bodensky, 1278; Olga LaBarbera, 1266; and Bernie Ellensohn, 1265.

The Grumman women will defend their title on April 5, 12 and 19 at the Syosset Lanes.

Big time. *At the Grumman soccer team debut at the Nassau Coliseum, goalie Joe Rietschlin clears the net. The varsity's next game is slated for Feb. 23 at 5 p.m. and Feb. 24 at 9 a.m. at the Nassau Community College, Hangar 6.*

Tennis club preps for '80

The Grumman Tennis Club kicks off the 1980 season on Wednesday, March 11, at 5 p.m. in the Plant 5 mezzanine conference room A. All Grummanites are invited.

Membership in the club costs $10 a year. During May and June, there are tennis clinics, conducted by Grumman varsity player and longtime instructor, Bill Wenzel. Ladder competition is held for beginners, intermediate and advanced players. At the end of the season, tournaments are played. The club's tennis courts are located at the south end of Plant 2.

In addition, the tennis club sponsors weekend clinics. Recently, over 50 people attended a tennis clinic/party at the Roosevelt Field Tennis Club. If you're interested in finding our more about this GAA -sanctioned club, stop by the Plant 5 conference room on March 11

Theatre tix

Employee Services offices have a variety of entertainment tickets now on sale. Here's just a sampling of show tickets being offered:

New York City — Easter Show at Radio City Music Hall, Sunday, March 23, 2:30 matinee, $6.50; Dancin, Sunday, April 13, 3:00 matinee, $21 for orchestra seats; and Evita, Wednesday, April 23, evening performance, $18.50 for mezzanine seats.

Westbury Music Fair — Teddy Pendergrass, Thursday, March 6, $12.50; Paul Anka, Tuesday, April 15, $12.25; Steve Lawrence and Edie Gorme, Thursday, May 1, $15.75; Tom Jones, Monday, May 26, $12.50; and Bob Hope, Thursday, July 3, $13.50.

Make checks payable to: Grumman Employee Services.

Hole-in-one. *Steve Jacobs of Plant 40 recently shot a hole-in-one at the Split Rock Golf Course's sixth hole. Steve used a three wood on the 207-yard hole.*

GAA weekend tourney lures racquetball buffs

Racquetball has really caught on as a leisure sport at Grumman. The GAA-sponsored Racquetball Club has over 250 members and that figure continues to climb. And now, racquetball buffs will be able to test their skills against other Grumman players in the first annual GAA racquetball tourney.

Unlike other GAA tourneys which run on for weeks, this tournament will be played over one or two weekends depending upon the number of entrants. Play will take place from 5 to 11 p.m. on Saturday and Sunday, March 29 and 30; if needed, play will continue the following weekend. All matches will be played at the Unique Racquetball Center in Bethpage at the corner of Central Avenue and Hicksville Road.

There will be three divisions: A, B, C . . . division A being the highest level of play. All participants will rate themselves this year; in following years, they will be rated according to tourney performance. Division winners in 1980 will advance to the next highest class in 1981.

U.S. Racquetball Rules will govern play. All disputes will be settled at the time of play. Each match will be two 21 point games with an 11-point tie-breaker if necessary.

This tourney will be double elimination; singles are played first. Doubles competition depends upon the number of entries.

GAA has arranged a special rate with Unique Racquetball: $8 per court hour for doubles and $6 per court hour for singles. Cost will be divided by players on court and paid to Unique on the night of play.

If you are interested in participating, fill out the entry form and mail it to GAA, A-01, no later than Friday, March 7.

Racquetball tourney

Entry form

Singles ☐ ☐ Doubles

Division ☐ A ☐ B ☐ C

Name: .....

Mail Stop ..... Ext .....

Doubles Partner .....

Mail stop ..... Ext .....

Mail to: GAA, A-01

The way it was

The day Jimmy Collins died

The following excerpts are taken from an article written by Grumman retiree Alonzo Gibbs for the Long Island Forum *— March 1978. As a young adult working at Grumman, Alonzo considered Jimmy Collins as a hero. A well known test pilot, Collins had been writing a series of articles on flying for the* New York Daily News *and the* Saturday Evening Post. *In 1933, he tested Grumman's first single seat fighter, the XF2F-1. He was hired by Grumman two years later to test the XF3F-1. It was to have been his last job as a test pilot; Jimmy was about to begin a new career as a writer.*

Farmingdale, N. Y., March 22, 1935 — Congenial weather, a warm spring sun, made it possible for the pre-flight crew to work outside on the flying field in just their coveralls. The name GRUMMAN, shaped as an airfoil section and faded from much laundering, appeared on their backs.

Oliver Hardy and I stood together staring out the big-multi-paned window where a squat little fighter was being wheeled across Hempstead Turnpike.

"That the new job?"

"The XF3F-1," I said. "Jimmy Collins is going to dive-test her today."

Jimmy had been in and out of Engineering for several days, smartly dressed in dark brown jack and light pants. Only the day before, Collins had put the plane through the initial flight tests; he had horsed it around, as we used to say, and offered his suggestions in the way the flying wires of the biplane were rigged.

The way it was. *Test pilot Jimmy Collins crouches beside the Navy/ Grumman XF3F-1 biplane fighter in which he died the next day. The child playing with the turnbuckle is his son. (Photo by Grumman retiree Charlie Tilgner Jr.)*

Now, in just a night, time had moved on to a climax. Throughout an exciting day I watched from my window as Jimmy would climb into the cockpit, parachute pack dangling. Take-off followed take-off. He performed speed dives first. A terminal velocity dive meant letting the streamlined airplane fall until it reach the point where it could not fall any faster. Thousands of feet were lost in such a dive before the control stick was hauled back gradually and the structure sang with the strains upon every bolt, rivet, forging, even the aluminum skin.

Down below, those few engineers and draftsmen still at their boards would tilt back heads and wait out that banshee wail of flying wires and engine, high above the factory roof. Then they would breathe deeply as the sound came to a safe and gradual dimuendo.

As the day passed by, dive exceeded dive, in speed at pullout — 340, 360! At 4:30 p.m., quitting time, the dives were still in progress. Collins was eager to have done with them and insisted on continuing.

My father picked me up in our battered Model T and I had to go home, but I left the plant reluctantly. For just a moment, I paused at the factory door, seeing Bill Schwendler and Charlie Tilgner and other engineers, out on the apron, their faces showing the concern of men who have pitted their highest skills against contingency and fate.

On the way home, I could hear the whine of Jimmy's final dive about the rattle of our four cylinders as we crept along. Then, my God! the sound seemed to break off too suddenly. What had happened?

Later, those who watched from the ground could only imagine. At 15,000 feet or so, where the air is frigidand the oxygen thin, he thrust the fighter down. At a screaming speed he pulled back on the stick, eager to show 9g's on the V-g recorder.

There was no g-suit then to expand securely against his lower body and keep the blood in his brain — that came years later. Some said that he had gone into the men's room and strapped his abdomen with wide adhesive tape before going up for the dives. He may have; test pilots did.

Chill of fear

Engineers and mechanics staring up from the apron felt a chill of fear. Sound is slow and light is fast, so even before the whine of the engine broke off abruptly, what had happened was already visible to them. The engine was adrift as a dot in space, the fuselage somewhere else, and in it was Jimmy.

Either through misjudgment or a gust of wind, he had pulled 14 g's instead of nine! Fourteen times the weight of the aircraft had come a destructive load on the ship! Control surfaces floated as far away as Lindenhurst.

No sign of life

"Jump, damn it, jump!" was on everybody's lips. But no slim figure emerged, no parachute mushroomed against the smoky evening sky. The fuselage hit a tombstone in Pinelawn Cemetery.

Six months before, Jimmy had written a piece called "I Am Dead," for the *Daily News* should he not come back from testing a new Curtiss bomber-fighter for the Navy. It reads in part: *But there is not only the spoken and written word. There is also the formless, unbreathed word of mood and dream and passion . . It is the word of life and death.*

GRUMMAN plane news

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